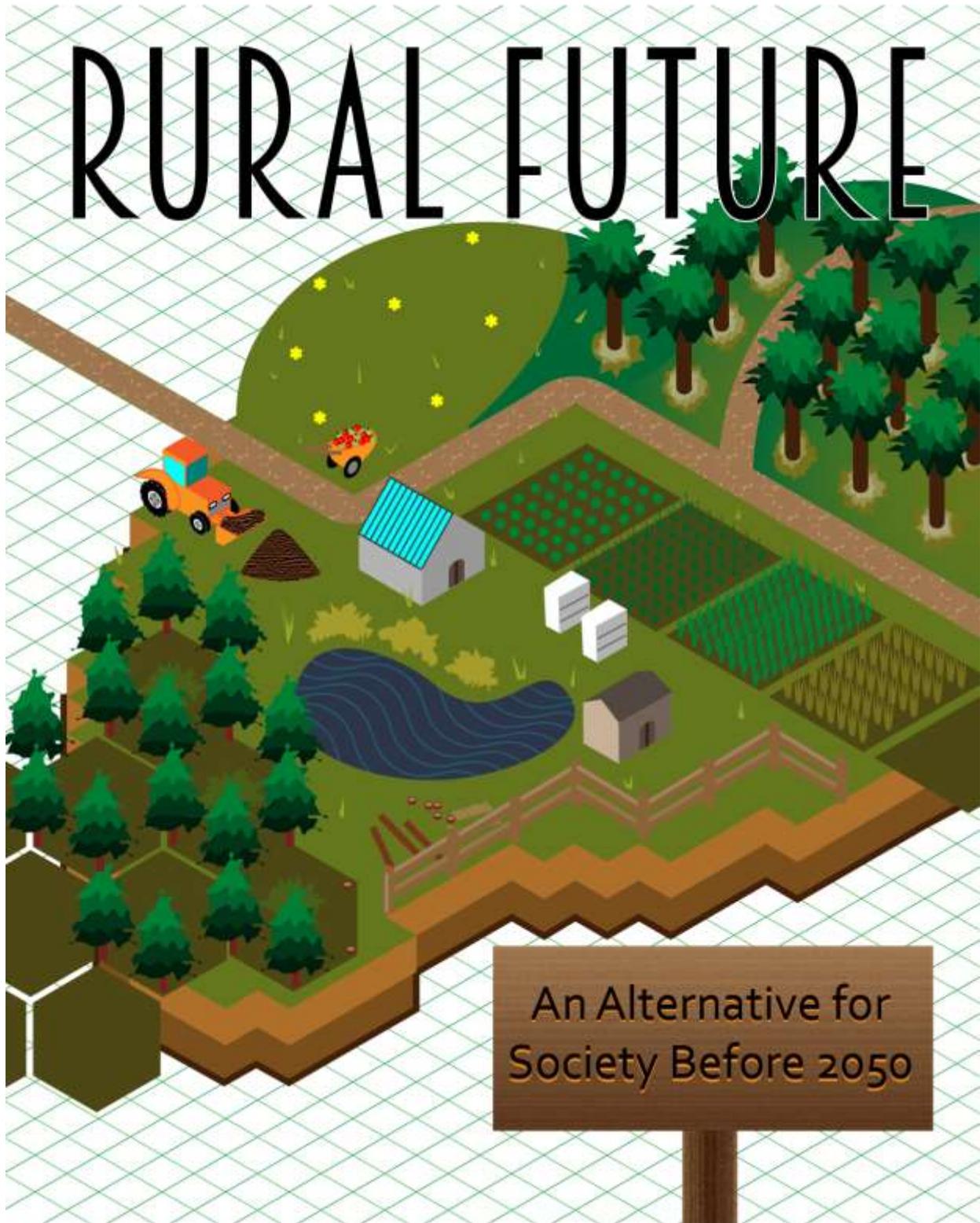


# RURAL FUTURE



An Alternative for  
Society Before 2050

# Rural Future

An Alternative for Society Before 2050 AD

By: Robert H. Giles, Jr., Ph.D.

Edited by: Laurel Sindewald

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# Appendix One

## The Future Rural System: Sectors, Groups, and Major Projects

*Groups and their projects in tetrads are likely to become enterprises working on or around the leased rural lands of absentee owners.*

“Well what about...?” is part of a question that gets in the way of almost every attempted description of Rural System. I try here again from one angle.

I have a plan, one that I continue to develop, to help significantly improve the contributions of rural areas in Virginia, and beyond ... to Earth. In Rural System, we shall help meet the needs of landowners leaving rural areas for assisted living, and those following their families toward urban jobs and conditions. We shall help some owners form “clusters,” or Collaboratives, for significant financial reliability and gains. We respond to the great needs of people for jobs, and to do that, combine with lasting purpose enhanced education, community strength, and diverse resource-related opportunities.

Rural System is designed to contain Support Groups: The Land Force, The Lands Group, System Central, and Safety and Security. All are seen as related, mutually supportive, and profiting together in an agriculture-like, modern rural “Conglomerate.” Only a few of the Groups are likely to be within conventional, well-known types of land-based farming.

Rural System is designed to work well on the lands and waters of absentee owners who have left for the cities. It’s for unoccupied land and all other aspects of the evolving rural area: its appreciation, uses, and products. The list of Groups is a set of ideas about potentially-profitable enterprises for rural areas, for achieving Rural System objectives... motivated by profit for the long-run, for the land owner and Rural System, and for the good of the region.

As you have read, some of the Groups are land- and water-based, while others are quite varied. They are believed to be feasible, practical, but only likely to succeed when cast within Rural System, by design, intent, and with enormous amounts of well-linked work. The main characteristics, about which you have read, are:

1. a general-systems approach;
2. diversity of scope and scale, dynamic and with feedforward;
3. land- and water-based “approaches,” but others as well;
4. precision practices (computer-generated decision software aids with GIS and GPS);
5. single-ownership decisions, plus clustering of contracted land ownerships;
6. using published research findings, and engaged in studies;
7. using value-added ploys throughout;
8. using intensive, widespread, computer-aided marketing and careful branding;
9. using services of System Central, The Land Force, and The Safety and Security Group, with shared working teams and equipment;
10. making widespread use of transition functions, expert systems, and with a rationally-robust strategy;

11. using diverse time-scales, with historic input and planning for the future in 10-year increments, over 150 years;
12. working from a bounded-profits objective;
13. employing “lean” strategies with production efficiencies; and
14. employing a modern “Cooperative” or “Conglomerate” strategy.

We unify these strategies, in response to a growing population of people who have moved from rural lands. We plan to meet the needs of people left behind for many reasons and to achieve major gains over the high “poverty walls” around us, partially by using new tactics in addressing addiction and poverty.

Herein is a changing list of over 150 Groups planned for development within Rural System. Each Group will be very independent, but share in the financial successes of the Conglomerate, rewarded by cooperative efforts with other departments, and contributing to unified financial successes. Each staff person with these Groups will be engaged (within their major and/or professional field) in the list of Rural System objectives. Successful, diverse marketing and creations are expected for profitability within the Swarm (Chapter 2).

Numbered Sectors, below, are temporary organizational placements for the Groups. Each Group has a corresponding 2-8-page descriptive file,<sup>1</sup> suggesting a prescription for the landowner to consider after his/her request for land advice. Each prescription is followed in the file by parts of the rationale. Only minor introductory comments are shared here.

There are 6 Sectors (roughly similar categories) and over 150 suggested Groups. Some of the Groups have been discussed elsewhere within *Rural Future*.

## Sector 1: System Central

1. **System Central** is the administrative unit of Rural System. All leadership employment, record keeping, accounting, insurance, and “paperwork” are handled through this unit. Large computer systems are also maintained.
2. **The Collaborative** is designed for developing and improving a lasting enterprise, working locally, then regionally and internationally. It may have significant influence on the conservation, preservation, restoration, and management of natural resources and the people dependent upon them for a system of modern, sophisticated, computer-aided natural resource management.
3. **The Water Group** performs Crescent management on all enterprise environments, working for ready, assured access to the increasingly scarce and variable water resource and its benefits for Earth’s people.
4. **The Drinking Water Group** tests and maps sources and supplies of drinking water throughout the region.
5. **The Groundwater Group** stays in touch with national groundwater resource data and attempts to relate it to changing surface water supplies and dynamics.
6. **The Healthy Streams Group** works closely with The Water Group and The Fishery to manage streams on enterprise environments for multiple benefits.

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<sup>1</sup> The full text for each can be found at [ruralsystemguide.com](http://ruralsystemguide.com).

7. **Land Partnerships** – Forming a legal partnership is a way to get a cooperative approach to manage rural lands and to preserve the integrity of the larger ecosystem, developing and aiding “clusters” and a new organization similar to agricultural cooperatives.
8. **Ranging** is a word for action together for all dispersed outdoor recreation and related activities. It is a new form of soundly-based, diverse, regional tourism, eco-tourism, and sightseeing, combined with most forms of extensive outdoor recreation (hunting, fishing, archery, boating, swimming, hiking, biking, camping, climbing, birding), outdoor projects, events, memberships, shows, contests (e.g., triathlons), and games. It is for residents as well as guests, some called “ecotourists.” It is a planning, guides, media, and coordinating enterprise.
9. **The Base Group** is a marketing Group promoting all of the enterprises, a mini-chamber-of-commerce seeking memberships, affiliations, and attendance at conferences and other participation.
10. **The Insurance Group** provides a few experts to handle the complexities of modern recreation, land use, health and other special insurance for the public and for all members of all of the Groups. The Insurance Group seeks comprehensive knowledge and efficiency over services dispersed within each of the enterprises.
11. **The Wealth Management Group** assists land owners over the complexities of forest and land taxation, investment strategies, and land trust decisions, all affecting risks and annual decisions about planting, timber harvests, building improvements, energy conservation measures, funds for college tuition, and inheritance estates.
12. **The Law and Justice Group** offers and contracts a wide array of legal services for rural residents, ranging from land sales and trust arrangements to protecting clients from unknown laws and regulations and impact-condition violations.
13. **The Rural Knowledge Base (RKB)** has unique international library and database connections that allow superior reports to be prepared on almost any rural topic. Results are useful in management, research papers, legal briefs, and in work with The Memorials Group and others that contract for books and marketing documents being developed on assigned topics.
14. **The Statistics Group** advises and makes functional the published indices, e.g., related to diversity, spatial analyses, and population dynamics.
15. **The Lands Group** collects information on lands under Rural System management for landowners, and as input to VNodal. It takes care of boundary dimensions, maps, and photographs, essentially managing a profile for each enterprise environment. It works closely with The Realtor Group to ensure management is proceeding optimally to improve land value. The Border Group is consulted over disputes between neighboring landowners, and within clusters.
16. **The Realtor Group** locates desirable sites for clients, and helps owners sell lands and facilities to those with special interests. It provides exceptional information about land via RRx documents and links, increasing land value and the means for its improvement and development ... or resale.
17. **The Marketing Group** coordinates marketing efforts for Rural System and all of its Groups.

18. **The Guides Group** is a group of bonded, insured guides and interpreters, available to safely conduct individuals and groups to meet needs of all types within the region, as related to Rural System objectives.
19. **The Transportation Group** coordinates Rural System’s vehicles, and explores topics associated with transportation and its impacts on wild flora and fauna (such as transport of invasive species, pollution, and habitat fragmentation, but also technology for improved energy efficiency in transportation methods).
20. **EarthQuilt** provides advice and connections for failing communities and groups, helping with suggestions, information on past successes, and opportunities for working ideas. It works with The Rural System Foundation.
21. **The Rural System Foundation**, a nonprofit, was often recommended in the early days of the design of Rural System as “the way to go,” rather than “for-profit,” since Rural System was so evidently interested in environmental topics, in conservation and improved land use, and had strong educational, health, and poverty-reduction components. Sticking to the “for-profit” theme, an alternative was developed for an internal foundation dealing with esthetics, education, conservation, environmental improvement, and research.
22. **The Safety and Security Group** provides a variety of aids to Rural System landowners to protect them from fire, theft, vandalism, and trespass. It installs hardware, patrols, and conducts modern education on safety and security topics (in collaboration with PowerPlace).
23. **The Health Group** concentrates beyond the natural resource-based part to deal with the human health aspects of the system. We approach human aspects as part of system objectives (socioeconomic, value systems, esthetic, recreation and ecotourism). People in rural areas need to know about healthful gardens, diets, exercise, avoiding trauma, and how to gain emergency treatment—all to reduce loss in the profit equation for rural life. The link to The Safety and Security Group in preventing accidents is clear.
24. **The Communities Group** of Rural System is focused on meeting our community objective, and on providing annual reports with information about Rural System's impact on employment rates, health and wellness, and quality of life. It looks first to see where the heart and soul of a community is, where people gather and what they value. It gathers data about conditions in communities near enterprise environments, consults VNodal for prescriptions to improve those conditions, and works with other Groups (e.g., The Health Group, PowerPlace, Advance Group, The Land Force, StairSteps, Elves, Inc., The Border Group, The Foundation, etc.) to enact those prescriptions.
25. **The GIS/GPS Group** tends to use the Alpha Unit concept, seeing land as 10 x 10 meter squares (with other vertical dimensions), and, from past work and data sources, maintains a knowledge base of over 100 factors about such map units. Handled within a computerized Geographic Information System, such data can be transformed using statistical models into site-specific values, such as “probable suitability” or “likely production,” and mapped for use in the field and elsewhere. Most field-related Groups use the services of this Group in planning, precision management, impact analyses, and legal action.

26. **The RRx** (Chapter 4) provides information and guidance for making difficult, multifaceted, high-risk land use and development decisions that have long-term rural effects. It is now in Phase 1 for a dynamic planning system for large areas and an alternative for land-use “zoning.” It emerged from work with TVA, U.S. Naval Surface Warfare Center, and with a county-level comprehensive planning effort. The RRx system is planned to produce a dynamic plan for a landowner, available from a secure Internet site. The landowner will be able to call up his or her plan at any time, see color images, photographs, graphs, maps, and the latest information about the area and the plan. Models for components of everyone's plans are managed and improved from a central office but each person's plan remains directed to their personal objectives and local conditions.
27. **VNodal** is the data storage and prescriptive software system organizing Rural System. It is essentially the brain, compiling decades of research to provide prescriptions for optimized management actions on Rural System enterprise environments. The software stores data spatially using GIS software, and uses complex algorithms to analyze the data and make prescriptions. VNodal directs both intra- and inter-group operations, determines what groups will be active where on enterprise environments, and how enterprise environments share resources in clusters.

VNodal is a large, complicated system under continual development. It can produce a daily prescription based on a plan for each of many areas. It has people, space, past research findings, computer software, databases, and hardware all working to produce, on demand, a “document,” a daily prescription for action by the Land Force and others. VNodal holds that a total natural resource system, if managed very well for profit, can be sustained and made profitable into perpetuity. The working premise is that only a profit motive (or self-sustaining financial motive) for a complex, modern, private enterprise can assure superior, ownership-specific management recommendations.

28. **SBNodal** is an all-in-one business management solution. The “Small-Business VNodal,” or “SBNodal,” was proposed to serve each of the many Groups of the Rural System Conglomerate. SBNodal will deal cost-effectively with contact management, email management, document management, project collaboration, telephony, scanning, and more. SBNodal will be designed as a single business solution—a small subsystem that can manage these communication activities and bring separate reports or business documents for staff and board members, and then other relevant parts to system landowners, Land Force members, the public, and to market decisions.
29. **The Software Group** objectives are to find, acquire, and make useful functional software, matched-well with the objectives of the conglomerate, serve individual enterprises, and press to meet all software and simulation needs and financial opportunities.
30. **Inquire** is the unified laboratory and laboratory referral service. It may be included within VNodal but sells specific services in soil, water, forage, seed identification, and toxic substance analysis. Cost-effective work and notable marketing set off the enterprise. It is closely affiliated with The Foundation. It develops applications of Ecorods.
31. **The Energy Group** works with and promotes the leading paradigm of rural resource management, that of energy budgeting. Concentrating on “embodied energy,” the energy required for an object or idea to be produced and exist (the major energy equivalent), the

Group does optimization to meet needs in long-lasting objects or produce, with minimum energy inputs. Antiques, for example, are highly prized and usually have been temporally-, energetically-, and monetarily-costly to produce. Special tools help do work, and those that are costly to produce (e.g., stainless steel). Lasting objects are favored for their embodied energy. Solar radiation is carefully mapped (GIS) and studied for maximum crop yields. Energy analyses are arranged for structures.

32. **The Carbon Market** studies the carbon sequestration or storage policies and opportunities for carbon credits throughout forestry, gardening, and rangeland and pasture developments. The Group studies carbon estimates for water, soil, litter, grasslands and corps, and forests, and collects or creates models for pictures of likely carbon “sequestered” within each ownership over time. It advises on carbon credits for land owners and how they best fit in land-use, and in energy and financial budget optimization.
33. **The Waste Management Group** works to ensure proper waste disposal or use for all Rural System clusters and Groups. The Group seeks to reduce waste, to determine opportunities for reuse, direct organic material to Alpha Earth production, and to recycle wherever possible.
34. **The Zeta Group**, or international program, is a company promoting the expansion of Rural System internationally. It studies the ecological potentials, the legal and financial limits, and works to assist localities to implement Rural System locally. Its premise is that the only major changes in the mapping and software dimensions are those of translation and changing coefficients for models that are in use. It works with the RKB to capture “folk knowledge” for the prescriptive systems.
35. **The Reach Group** has members who are not authorized to speak for the Group, but are encouraged to raise questions and, as stated, “share concerns.” The Reach is within Rural System and seeks to strengthen the rural economy, starting in Virginia, going internationally, but responding specifically to about 50 million Americans.
36. **VNext** describes and promotes the Rural System corporation for its near future. It is a special marketing, advertising, and promotion Group, selling not the Group itself, or any other particular Group, but developing the Rural System concept as a whole, its uses and utility with stable, professional backing.
37. **The Land Force** is Rural System’s workforce, shared among clusters and sometimes also among Groups. The Land Force is responsible for carrying out management prescriptions (RRx) on rural lands and waters.
38. **Advance** is imagined to be a small Group within Rural System that assists the public local courts and affiliates in achieving supervised community service work for individuals—work that is required and is constructive, meaningful, and planned in the region.
39. **The Work-at-Home Group** is built on the increasing awareness that many employees do not need to work at a central office or plant. Many can work efficiently during many days each week from their homes, or from local central places. Computer programmers and others can correspond by voice and image worldwide via the Internet to deliver products and to make conventional business arrangements cost-effectively. The company arranges procedures, finds willing participants, and monitors work performance.

40. **Competency** is a Group that assures employers that rural workers have the competency that they assert. It is skeptical of “grades” and “diplomas” and overly diverse programs of study, and conducts field tests of individuals for certification to prospective employers in ability to perform each of dozens of small tasks – some in the field, office, laboratory, or computer.
41. **PowerPlace** is a plan for unique, physical educational spaces, learning/teaching facilities where high-intensity education is done. While augmented with distance learning, the spaces emphasize essential human contacts, physical materials, and group situations unavailable by modern computer-based education. These are spaces where advanced research findings flow to give greatest possible individual behavioral change per unit time and per unit dollar.
42. **The Studies Group** conducts diverse research studies in collaboration with PowerPlace and other Groups.
43. **StairSteps** works from an office in a rural community where it maintains a private, for-profit employment service for people with special talents and abilities who seek part-time work. The business model is somewhat like that of Uber. The members (often in tetrads) choose to work whenever they want, for as many hours as they want, and there’s no need to ask anyone for vacation. They are a new type of consultant, often with *many* skills and talents (as is common within rural settings) and willingness to work alone or within small groups.
44. **The Histories Group** works to complete records and use them in historical and ecological analyses and projections, ensuring such documents are a part of the history of each region, tract, or ownership.
45. **The Signs Group** creates signs and puts them in correct places. Signs can be used to create Group branding, and used to maintain awareness of hazardous areas.
46. **Stoneworms** is a trail building and maintenance group. It relates with national and international trails but builds trails on local lands that provide for recreation, education, and solitude. Stoneworms creates specialty trails for hiking, horseback riding, and mountain biking.
47. **The Border Group** will coordinate rural-urban border management actions, and resolve any planning conflicts that arise. The urban and regional border is a place of growing conflict and difficult problems. As homes and shopping malls proliferate, the United States loses about 6,000 acres of open space every day, four acres per minute. Border area development is among the most important in the world.

## Sector 2: Forestry Topics

48. **The Forest Group** affiliates with existing forest inventory and management enterprises, helps market their services, and expands on their potentials by the Tours Group, Nature Folks, Certification Group, Fire Force, and others. It has a primary role in dealing with the part of lands with trees and can be a major income source. Their role in the probable increase in financial productivity over the long-run is notable.

49. **The Foresters** is a local organization for Rural System staff, associates, colleagues, school children, and anyone interested in forests and forestry. The Foresters cover all of the forest-related topics related to Rural System enterprise environments and their problems, values, benefits, management, and use. It is a means to promote the forests, reward successes, and increase communications. The Group provides tours, an annual conference, advantages in clothing, books, and equipment purchases, website access, recreational advantages, and discounts on Rural System services. It may become affiliated with Nature Folks. Income is from membership fees, advertising, conferences, tours, and commissions on publication and book sales.
50. **The Certification Group** promotes and arranges for cost-effective forest land certification under Smartwood. Smartwood is a recent development in forestry and wood processing generally. The Rain Forest Alliance and the Forest Stewardship Council have developed a set of criteria for well-managed, sustainable forests. When a forest meets the criteria, it may be certified as environmentally sound. Special attention as well as economic incentives follow. The Designation significantly increases the value of the forest products from the areas, initially by about 5-10%.
51. **The Fire Force** as part of The Land Force, adds to the quality of the Smartwood certification but deals with prescriptive burning for select silvicultural needs, pasture management, and above all provides a superior emergency attack crew to fight against rural fires, typically non-structure fires. It engages in prevention, clearing buildings from threats, and serves as a local “hot-shot” crew for rapid attack of fires. It continually monitors the literature for new insights into fire behavior, arsonists, and attack efficiency.
52. **The Firewood Group** provides superior dried species-specific firewood to urban and residential markets from Rural System forest tracts. It studies and may become involved with biomass production for energy needs.
53. **Holiday Trees** raises superior “Christmas trees” with the distinct strategy to appeal to many people of different religions during the holiday season. We may contract with growers for special uses of their lands. Beyond “Christmas Trees,” the Group explores a market for trees sold seasonally for other purposes and profits.
54. **HyperHardwoods** is a Group applying a systems strategy for managing hardwoods on Rural System enterprise environments, which must be managed over many years for optimum wood-quality.
55. **The Chestnut Group** seeks to work with existing organizations now developing American chestnut orchards, hybrids, etc. Involvement ranges from nursery and tissue-cloning through crop marketing and expansion of working orchards.
56. **Walnut Vales** is a group using GIS to locate superior black walnut growing sites. It then attempts to secure or rent such sites and to develop superior, well-spaced trees for nut-fruit production as well as furniture wood. It develops sites, gatherers, husking centers, waste disposal and alternatives uses, and manages the sites for high-quality wood, nut, and nut-shell products.
57. **Antique Nut Groves** will select a species suitable for sites with good growth potentials and abundant nut production. This is evidently a demonstration of a lasting concern for and investment in the region. It is an emphasis on a high-valued crop (like tobacco) of international (potential export) interest.

58. **The Cedar Group** operates to preserve, enhance, develop, and manage a Virginia red cedar resource. It exploits a new single-species strategy in natural resource management, one intimately linked to all of the other Groups within Rural System.
59. **The Arborist Group** specializes in work with individual trees, especially those of the residential and rural village landscape. Involved with tree health, it is also concerned with developing wild fauna habitats, reducing convective energy losses from buildings, recycling leaves and debris, and finding alternative ways for enhancing land value.
60. **The Wilderness Group** helps use well such areas locally that occur on state and federal lands. It is keen to note private tracts that have wilderness-like characteristics, and to seek reasonable protection for such areas in the midst of intensively-managed forests on adjacent land. It is a key unit for many members of Nature Folks, sponsoring wilderness tours and diverse events.
61. **Earshot** is the soundscape Group. The Group works with Nature Folks and listens for and records the sounds of nature, such as the calls of birds and particularly the night sounds of amphibians. It forms a paying membership; issues a newsletter; sells equipment; sells tours; and provides certification services for industry certifying certain noise levels and changes resulting from management, private groups promoting a quieter space, and sales of services for quieting situations (such as buildings, dog barking, individuals, and equipment). It utilizes research on noise attenuation resulting from vegetation. It uses GIS to analyze gun shots to assist in law violation detection. The hunted zone and its gun noises (randomly distributed gunners) are mapped for general interest. Locating houses and recreational sites can be done with noise sources in mind and measures (or topography) selected to reduce effects of noise on people.
62. **The Odorscapes Group** works to detect and understand the odors (microparticles, including gas molecules) of substances. It provides services for analyzing the potential impacts of factories and developments on natural areas and other rural areas of importance, and developing a rapid analytical system for expressing likely olfactory impacts. It analyzes wind and its effects within ecosystems, including timber harvest patterns; works with scenting security and hunting dogs; studies baiting; and assists in rural law enforcement and hazardous material detection and cleanup. It presents regional floral odorscapes and quantifies the seasonally-changing fragrance (and allergens) of gardens.
63. **The Viewscapes Group** works with visual concepts of the rural culture. It maps, describes, quantifies, and develops scenes, themes, a county beauty index, and a procedure to negotiate balancing losses and gains in natural beauty that may result from proposed development. The land of the Central Appalachian region is already beautiful, but that beauty can be enhanced. Even more important, it must be managed so that it is not diminished, and so that the full messages of the Rural System and of a system of total land management can be carried forward onto other lands. Staff develops plans, policies, and procedures for esthetic enhancement and management that will give the lands of the enterprise a personality and will assure benefactors that their lands will be similarly treated. Not another 'park service' or 'forest service' appearance, the new 'look' of the Rural System lands under its stewardship shows care, attention to studied concepts of natural beauty, cost-effective work, diversity, sustainability, durability, and functional amendments to views and scenes.

64. **The Landscape Group** of Rural System links well with the Gardens Group, and concentrates on the broad field of the home or office garden, yards, and vegetation... but also the vast scapes of the rural areas under management and effects of nearby national and state-owned public lands.
65. **Elves, Inc.** is a modern sophisticated program for creating, restoring, and managing cost effectively scenic, healthful, nature- and tree-dominant communities of rural towns. It is likely to require a cooperative, a business or public/private coalition, or a conglomerate to achieve the benefits of diversification and synergistic relations. The results are *Elves lands*, the more natural managed spaces of trees and shrubs, landscaped spots, streamsides, ponds and their borders, and, in coordination with Viewscapes and The Border Group, areas at the borders of towns and cities.

### Sector 3: Wildlife/Nature

66. **Nature Folks** is a membership organization like the Audubon Society. It has many special-interest parts, listed below. It caters to people with diverse interests in nature, in unusual spots, in wilderness, and in invertebrates and “creepy places.” It manages an electronic bulletin, conducts tours, and promotes studies of phenology (the timing of biological events such as flower burst and leaf fall).
67. **NatureSeen** collects observations of nature rarely reported elsewhere. Electronic storage at low cost allows nature observers worldwide to prevent the loss of unique observations. A search procedure allows subscribers to benefit from these usually-singular observations that may form a pattern over many reports over time. Born of a rich, novel curiosity, the reports offer unlimited ideas, a story-fodder for writers.
68. **The Coyotes Group** conducts tours of areas to observe coyotes and foxes, usually by use of electronic recorders at night. It builds a community interested in the wild canids of the world, and sponsors tours to build life-lists (akin to the well-known bird life-lists).
69. **The Foxes Group**, more-so than for other species, will require special attention to allow and provide human recreational viewing as well as diverse alternative uses in pest control, hunting and trapping, rabies outbreaks, and as predators in ecosystems.
70. **The Owls Group** conducts local evening tours for bus-loads of people after a restaurant dinner. Owls are “called up” on managed Rural System enterprise environments, and later people enjoy evening entertainment. Owl research is sponsored, and tours are arranged for those seeking a life-list maximum for seeing the owls of the world. Sculptured owls are sold from The Sculptors Group.
71. **The Plant People**, also of Nature Folks, specializes in the non-tree wild plants. It creates special gardens, conducts tours, sells plants and products, and sponsors art and poetry contests. The Plant People monitors plants, caters to knowledge of the plant populations of wilderness areas, and promotes life-list progress for members. It harvests plants from areas about to be destroyed, covered by construction.
72. **The Butterfly Band**, of Nature Folks, is the insect and arthropod company seeking to maximize profits from insect-related activity, primarily that which is related to moths and butterflies. Expressing interest in biodiversity, a national and international concern, the Band seeks to learn of the ecology of the insects of the area. It deals with pest species, but

caters to bees and honey production, biological supply of house products, and tours for those making collections and additions to life lists.

73. **Prospectors** is the geology enterprise of Rural System. It works with GIS maps, collaborates with soils specialists, conducts educational tours, and provides specialized groundwater and mineral resource analyses for Rural System area owners.
74. **The Fishery** is a large, diverse group with separate talents for pond and lake work as well as those for stream and river work. It builds communities of managed farm ponds within an area, offering diverse private land opportunities for recreation as well as food. It sells opportunities, film, supplies, memberships, guide services and educational materials, does analyses of ponds, lakes, and streams, and markets, relating to trail and wilderness interests and fish production. It conducts a growing wild-fish life-list-building enterprise with aquaria and equipment sales.
75. **The Raccoon Group** is new. Few people realize the complexity and relations of the system relating to raccoons. We must apply findings of many studies, not just on the biology of the animal alone (the past trend), but on the total profitable enterprise. The prospects are not for recreational trapping (strongly opposed by some), but for a viable, profitable enterprise utilizing one of the natural products of the Rural System areas in ways no one else has been able to sustain in the past. This is a single-species system, related not only to furs but also to several types of hunting and related hunting dogs, and to population management in forests and wetlands.
76. **The Furbearer Group**, clearly related to The Raccoon Group, is primarily interested in profits from a fur enterprise. The Group's strategies include marketing of furs; strategic buying; improvements in trapper success and humane taking; improved care of the pelts; storage; local cutting and trimming; and alternative uses of each entire carcass. Fur markets seem to fluctuate due to style and other phenomena. We propose to work with the fur industry, seek new marketing strategies, avoid public confrontations, retain a private-for-profit stance, diversify the work of the group, and demonstrate the potentials of storage to achieve sale when prices are high. Work will include sophisticated research (expected to attract visitors and students), and develop memorial books about furbearer species; furbearer workshops for biologists; trapper schools; vertebrate pest damage management schools; and fur-buyer classes. Software development will enhance some work, especially as studies show how ecological communities (that support each furbearer) change over time. The Furbearer Group will create maps depicting trapping zones, the presence of animal sign, species conflicts, profit per unit area, and costs-to-take.
77. **The Beaver Group** is a specialized program for beaver management, including beaver removal, tours, education, anti-preservationist work, publications, damage assessment, legal assistance, and integration with forestry and fisheries.
78. **The Deer Group** seeks to develop a productive wild white-tailed deer resource with net benefits to citizens within the county and region.
79. **The Black Bear Group**, like that of the Bobcat, Wild Turkey, and Raccoon Groups, is a deviation for an oft-recommended multi-species or "multiple-use approach" to wild fauna management. It caters to people interested in bears, offers tours to see bears and their

habitat in the wild, sells photographs and sculpted objects, attends to pest and damage issues, and provides membership services.

80. **The Bobcat Group** is a wild felid-oriented Group with memberships, conferences, tours, and active management of the bobcat population in select areas. This Group, perhaps more so than other Groups, concentrates on studies of the animal and its environmental needs. Clearly associated with wilderness and the furbearer groups, the cat resource is important to tourists, hikers, and others seeking outdoor experiences.
81. **Flights** is a complex, “total” bird resource center, studying and working from extensive data for bird resource reporting and public presentations. It coordinates bird watching interests, assists with BirdGolf, works with federal and international migratory bird organizations, sponsors bird watching tours, uses the state bird data bases actively, and assists The Owls Group.
82. **BirdGolf** is a new bird-watching sport, developed on a few select Rural System enterprise environments or contract areas. Users pay a fee to use the course and, after describing their abilities and the characteristics of the day and date, a “par” is computer-produced. Participants play against their own past scores or competitors, seeking to see all of the birds of the area. A score is obtained. Life lists of birds seen on all such BirdGolf courses expand the play internationally.
83. **The Phenology Group** is affiliated with Nature Folks and others. It concentrates on phenology, the study of the timing of biological event occurrences, the change in these events over the years (e.g., the migration of geese, the fall of leaves, the blooming of daffodils), and their correlations throughout Virginia and the region.
84. **The Geology Group** brings modern local geology knowledge to citizens of the region helping all understand structure, history, potential dangers, and extended appreciation of the local world’s geological influences.
85. **The Wild Turkey Group** serves BirdGolf in some areas, but is primarily for bird watchers and hunters. Guided tours are conducted to permanent blinds. Memberships include tours, publications, records, equipment reports, life history, and ecology work.
86. **The Quail Group** works on farm lands to stabilize key bob-white quail populations. It works with dog owners and field trials, developing select areas with high populations, and scoring areas and populations for memberships for people with specific high-intensity interests in quail, quail hunting, and quail as part of the living rural landscape.
87. **The Grouse Group** studies regional dynamics of ruffed grouse and relates it to potential dynamics on Rural System tracts.
88. **The Dogs Group** works with hunting dogs, maintains quality kennels, conducts dog training, and sponsors field trials. It has a unique scoring technique for trailing abilities of hunting dogs. A separate unit works to control the harmful effects of dogs on wild fauna and rural systems.
89. **The Bison Group** creates a special ecotourism destination. It maintains facility occupancy, allows uses of other enterprise services (e.g., Prospectors, The Fishery, The Owl Group). “After you’ve seen some, you’ve seen them all” may be the reaction of some people and satisfaction will only come from diverse experiences in a short period but over many years with regular returns to a planned special bison-related event.

90. **The Invasive Species Group** works with The Pest Force, but focuses exclusively on removing invasive species from enterprise environments. The Invasive Species Group maintains a list of invasive species, creates publications to educate the public about which invasive plant species to avoid in planning a garden, and otherwise works to prevent the spread of invasive plant species.
91. **The Ginseng Group** monitors the ginseng plant on Rural System lands, which is endangered in some areas due to Chinese medicinal interest. The Group assembles knowledge of the plant and its functions, seeks substitutes, and plans site-specific tactics for its survival.

#### Sector 4: Agriculture Topics

92. **The Pasture and Range Group** seems inseparable from The Fence Group. It designs and develops superior pastures for livestock of several types, using GIS and soils knowledge to achieve superior grass production and pasture and range conditions and uses (e.g., water and wind protection) for animal systems that will be profitable.
93. **The Fence Group** promotes new and attractive fences in the region for improved pasture management, and for manipulating the spaces of several livestock groups. It uses special dried and treated woods and develops protection against deer and other garden pests.
94. **The Pest Force** confronts vertebrate faunal damage as a system, concentrating on long term, cost-effective reduction of measured financial and esthetic damage, and not on pest reduction.
95. **The Bees Group** keeps bees under contract on suitable enterprise environments, working with The Products Group to develop high-quality honey- or beeswax-based products for Rural System guests, employees, affiliates, and for export to regional communities. We plan to diversify honey taste and quality, and market nationally and then internationally to key groups. Select management units will contain flowering trees within agroforestry lanes, with visitor/guest trails to come to learn, study, and experience our bees and honey.
96. **The Gardens Group** works with agroforestry concepts, promotes “victory gardens,” employs Alpha Earth, uses designed fences, beautifies and enhances land value, and participates in the work of the Carbon Market, Odorscapes, and Viewscapes. It develops specialty gardens such as those for moss, ferns, daylilies, and vineyards.
97. **The Good Garden Group** will specialize in superior garden products of comparable quality to “organic” certified produce, but without the extra cost of organic certification.
98. **The Day Lily Garden Group** studies recreational plant beauty and values, compared with plants grown for food sale.
99. **The Flowers Group** concentrates on maintaining flower gardens of emigrants. The Group responds to pollen supplies of bee populations and creates colorful attractions to managed areas for guests and potential future markets.
100. **The Moss Group** grows moss for floral uses. It is designed in part as competition to remove pressure on wild mosses being exploited. It caters to specialized fern and aquatic garden sites.

101. **The Bamboo Group** specializes in selecting optimum sites for the many species/varieties of bamboo. The Group makes site-specific sales, uses the plants for vegetating unique areas and providing special habitats, wind barriers, and develops handcrafted bamboo products.
102. **The Black-Eyed Peas Group** seeks to develop an expanded complex subsystem related to this single plant species.
103. **The Fruits and Vegetables Group** seeks maximum extensive profit from carefully-selected, GIS-specific Alpha Units, leading to abundant, high-value, market-specific produce for the future.
104. **The Yards Group** unifies work with the Pasture and Range Group, The Garden Group, The Sculptors Group, and The Fence Group to produce and manage pleasant, grassy areas and meadows around rural structures, urban borders, and “play” areas.
105. **The Blueberry Patch** produces blueberries on GIS-selected sites, and then provides specialized markets for large volumes from widely-distributed growing sites. The Patch is an under-stated system. It is created for private profit, employment opportunities, and heightened value of land that makes it especially worthwhile to tend well. It is more than a “patch”; really it is a system of patches, and the total Rural System that includes them.
106. **The Soils Group** tends to soil quality on the Alpha Units of all enterprise environments, and works with Alpha Earth to offer superior soil amendments.
107. **Alpha Earth** is primarily for vermicomposting and developing superior soils from waste products, sawdust, earthworm action, and thinned forest products. It sells a composted medium with instructions, equipment, and services for local gardens and yards.
108. **The Vineyards** are GIS-selected areas, selected to produce grapes for sale to local wine producers. Regionally dispersed, the well-selected sites provide local income.
109. **The Mushroom Group** will work to cultivate diverse mushrooms in several types of sites (forest, garden, etc.) on Rural System’s enterprise environment for commercial sale.
110. **The Stables** provides services for horse owners, trail rides, and several horse-training areas, with wastes provided to Alpha Earth.
111. **The Beef Cattle Group** is large and comprehensive, and is as sensitive to soil chemistry as to methane within global warming concerns. It works toward profitable herds of site-specific, selected animals within rural land clusters. (It will be delayed until local caretakers are regained.)
112. **The Goat System** works for improved goat herds worldwide, develops wildfire services (field and shrub fuel reduction), and works for improved pastures and quality dairy products, widely marketed. Goats are more efficient than cows in forage energy use for milk production, they survive bad range or forage years better than cows (thus reducing entrepreneurial risks and boom-or-bust situations), can improve the range itself, and have more stable benefits than cows. They do require more manual labor than cows,

but this is appropriate in some areas where there is surplus labor and/or where an active life outdoors is viewed as of high-quality.

113. **The Sheep Group** develops a major market for “organic” lamb. By “organic” we mean lamb that is as good for people as it is delicious, because the sheep are produced without using antibiotics, added growth hormones, or dangerous pesticides. Relations are explored with “hair sheep” and specialized meal recipes.
114. **Pasture Chickens** is a Group focusing on moving sled cage units around pastures to raise chickens for sale. Avoiding the morass of “organic” certification, the pure-breed chickens are presented as pasture-fed in healthful outdoor conditions, free of pesticides, medicines, and food additives. They can be seen by guests on farm visits in their pens. The pens are dragged regularly in rotation to new foraging areas throughout a pasture. There are bantams to meet meal-size preferences for individual and small-family buyers. Thirty percent more bantams can be produced in the space required for larger birds. They are well-protected from predators and selected in the brief period of optimum growth and nutritional healthfulness. All waste products are re-cycled into the “chicken pasture,” a unit of other pastures. Planned spatial routes prevent excessive manure buildups and undesirable sheet erosion and waste transfers.
115. **Future Feedlots** will create and manage superior feedlots now for Rural System livestock.
116. **The Rabbit Group** is profitable, though widely dispersed, with very small operations within a single large system. Small livestock, such as rabbits, have in common the characteristic that they are relatively undemanding in their feeding requirements and easy to house and manage. They provide the same products and services as larger livestock, such as cattle, but are less risky, are easier to replace (they are not costly and reproduce faster). By optimizing the management of rabbits, as well as integrating them into the farming system, the total production of the farm can increase considerably. They may offer regular cash income throughout the year for youth and others.
117. **The Goose Flock**, in addition to promoting domestic goose flocks, prepares and sells domestic geese, holiday meals, other products and services. The Goose Flock diversifies farm income from the total flock system on many ownerships with managed water bodies.
118. **Worm Corral** is a low-cost, efficient system for producing a wonderful natural soil booster. This is a system for moving organic materials into dark, pleasant earthy-smelling, friable matter that helps create world-class garden soil. The system builds soil and changes organic wastes into a useful, valuable product to enhance personal gardens and landscaping plants.
119. **The Wired Ecosystem**, a place for visitors, uses technology and knowledge from studies measuring temperature and various other ecosystem variables. It provides a place for people to learn about different ecosystem processes, seeing information measured live.

## Sector 5: Sports and Recreation

120. **The Wildland Crew** is a Group for adults, sharing common, guided experiences to build or develop wildland structures, or engage in useful projects. The Wildland Crew organizes 3-day outdoor experiences, with meaningful exercise, team work, recreation, and lasting memorable experiences. Local crews gain unique experiences, and also form bonds with other regional crews.
121. **The Bear Hunter Group** will some day gain name recognition for its care and treatment of dogs, full-scale use and development of all bear parts gained, farmer-protection investments in bear-related damage costs reduction (e.g., bees, sheep, pets), and supporting books, trips, studies, and counter-action and alternatives to *illegal* gathering and sale of “bear-parts” (hides, organs, skulls, claws, meat, and fat).
122. **The 4 x 4 Group** has great interest in off-road vehicles. It is an organization that sponsors safety, care of the wildlands, special events and tours, and does vehicle-dependent service projects.
123. **Under the Hood** explores a school for automobile performance repairs and enhancements, especially for rescue, field work, and general lifetime experience economies, and safety.
124. **The Wildland Walkers** is a hiking and camping club. Members use trails on Rural System areas and other trails, receive an e-newsletter, and are invited to conferences and shows. Safety, trail etiquette, and campcraft are frequent topics.
125. **Run Along** is a program to promote and encourage youth entry into natural resource-based and rural outdoor recreation activities. The program develops safe options, incentives, and guided programs. It is related to health and physical fitness, gender neutral, and links youth to public and private lands for rural work, as well as where outdoor recreation opportunities exist.
126. **Tetra Race** is a regional cross-country race seeking to become one of international interest because of high-technology dimensions, rural attachments, and major prizes.
127. **The Triathlon Group** sponsors triathlon events and related Rural Challenge events.
128. **Rural Challenge** sponsors an annual field event on a Rural System enterprise environment. The event features weight and strength contests dealing with rural items such as trees, hay, machines, rocks, etc. Stressing health and fitness and accident prevention, it profits from reduced costs of living derived from healthful practices over longer periods. Providing a notable target or justification for people exercising throughout the areas, it links exercise and health and the opportunities on Rural System lands.
129. **Getting Together** is a Group producing a central event for past and likely participants and neighbors, every 2-4 years. Fair-like, perhaps circus-like, the Getting Together event is diversely socializing, linking, sharing, and opening doors to local Rural System resources and plans.
130. **The Biking Group** is for people who own or are interested in the many uses, applications, and secondary consequences of using non-motorized bicycles. The Group is dedicated to increasing use of bikes, their proper and safe use, and to improvements in

health and land and resource conservation resulting from such uses. It works with the Triathlon Group, Wildland Walkers, and others.

131. **The Rural River Runners** have great curiosity about and love of the Powell, Clinch, New, James, and Jackson rivers (and later other rivers), and seek new ways to enjoy them, but also to protect and improve them. There are paid memberships. Members conduct tours of the rivers, refine use-oriented maps for the rivers and their tributaries, develop refined GIS databases for the Crescents, and monitor and report on land use dynamics within the selected Crescents.
132. **Tree Tops** is an enterprise featuring the potentially-growing sport of tree climbing. It has paid memberships, climbing events, and training sessions, but is for “loners” as well as for people who use modern climbing ropes and gear to go to experience new places, new views, and rarely-visited parts of ecosystems.
133. **NovoSports** capitalizes on interest in health and exercise. It promotes new, active, diverse ways for all citizens to become participants, non-spectators, and also to “get out” and to establish new relationships with others and with the outdoors. The Group may find special relevance to students of nearby college and university recreational programs, both for study as well as creative student involvement and personal enjoyment. Currently proposed Novosports are conducted outdoors. Money is made from memberships (as in a health or exercise club), and in attendance in the many diverse activities associated with potentially-growing new sports. Related units are The Triathlon Group, Tree Tops, The Biking Group, Tetra, and The Fishery (e.g., casting tournaments) and Great World Ball. Various conventional races (e.g., through Tetra or the Biking Group) are sponsored, but others, such as rope climbing, tug-of-war, and weight lifting may be explored. Atlatl Spearing and Topple teams are sponsored.
134. **Atlatl Spearing** promotes the sport of atlatl spear-throwing, sets up courses, cooperates with existing related enterprises, and sponsors contests for distance and accuracy. It recommends low-technology by restricting competition to primitive (non-metallic, non-plastic) instruments. Demonstrations of other atlatls and their properties are encouraged as part of shows and events.
135. **Great World Ball** is a diverse game for all ages played with a giant 8-foot diameter rubber or plastic ball typically covered with deer and goat skin. It is played in a 100-meter diameter circular field. There is an “equator” center line and north and south poles. Two teams face each other and the ball and, on signal from the “tender” (the referee), try to push the ball to touch the competing team’s pole. The game is one of strength, dexterity, stamina as well as strategy because “outside” becomes a competing force as the ball is pushed nearer to a pole. It is definitely a team sport. It can be a spectator sport, but participation of everyone is encouraged. It can be played in any season, indoor or out, any weather.
136. **Topple** is a new game where two players stand on 2-foot sections of large logs (about 12-inch diameter) placed on end within a sawdust pit (as needed to reduce injury from falls). The logs are about 16 feet apart. A 50-foot rope is stretched equally between the logs. A player stands on the log and, on signal, tries to get as much of the rope as possible (or needed) to get the other player to step off of the log. The winner is the last

standing on a log section. The game requires some strength but depends greatly upon strategy.

137. **Rappahannock Rock Skippers** is another game-oriented Group, promoting rock skipping as a sport. Fees to play the game are taken; gambling is avoided, and all fees go to promoting the game, developing the skippers, paying for the official stones, paying for the computer membership rolls and their backups, and contributing to the objectives of Rural System. Occasionally, travel fees are paid for winners to demonstrate and promote the sport, its publications and skippers, and otherwise to promote Rural System. Only small prizes are given in contests to emphasize the winners and playing for the fun of playing and to de-emphasize the material aspects of so many other games.
138. **Good Dog** is an enterprise that offers to owners of tracking hounds (typically raccoon hounds) an opportunity to quantify the goodness of the hound. The owner brings the dog(s) to a course which is on land of Rural System. A miniature radio transmitter is attached to a dog with a collar. A scent trail having been laid out by the staff, the dog is released and tracked by radio. The match between the path taken by the trails person and the dog is made and an analysis done. The squared deviation is used, a chi-square statistic. The dog that does not deviate from the scent path gets a score of 100.
139. **GPSence** is a business related to all aspects of global-positioning satellites (GPS). It sells GPS units and services them, provides training programs, and sells related technology such as altimeters and range finders. GPSence is a new organization involved in all aspects of geocaching. It combines excitement, adventure, knowledge, and strategy. Typically, each person rents a GPS unit (or uses their own) with vital coordinates of a cache. The location is very precise. The individuals or a team collaborate to find the caches (hidden boxes, metal stakes, marked trees, etc.).
140. **Rural System Riders** is a Group focused on offering horseback riding opportunities on Rural System enterprise environments. Several stables throughout the region may be marketed as a unit. They provide superior horse care under a veterinarian's supervision. A computer-based nutrition program for each horse and simulation system provides an analysis of status, finances, health scores, and shows achievement of system objectives. Publications and presentations on web sites and elsewhere include sections on ecosystem management, the role of horses in wildlife management, the attitudes of horse owners to a cooperative system of horse use and trail rides, the behavior of wildlife related to the wildlife-observer (whether on foot or on horseback), the horse trail and its construction and use in recreation and wildlife management, and the potential role of horses in ecotourism.
141. **Boating** works to offer canoes, kayaks, and small boats for visitors to rent for use on ponds and rivers on select Rural System enterprise environments.
142. **Youth and Adult Camps** first work with existing camp owners, then supplement or expand activities for year-around activities and services. These include day or extended camping experiences for youths, special programs for the elderly, and, in some areas, the Writers' Camps. These "camps" may be on university grounds, within or supported by Rural System Inns, or within separate grounds and facilities of this Group. A special facility, a language camp, is part of the dream.

143. **The Writers' Group** works with writers' talents and interests, promotes writing, provides services and contacts, and works with other "outside" Groups to achieve Rural System objectives as well as writers' related objectives.
144. **The Tours Group** works with local tours, acquainting local people with their own areas and opportunities. It conducts statewide and national tours that are related to Nature Folks and a variety of natural resource topics. "Exchange" tour programs are offered with Rural System Groups developing in other countries. A variety of bird and other animal "life-list" building Groups are formed, and tours are designed for them. The Tours Group depends upon Rural System Guides.
145. **The VA Touring Group (VATG)** in Rural System will study the *existing* natural resource areas, specifically of the Commonwealth (called herein "parks"), develop relations with transportation and nearby lodging and food enterprises, and work to build a specialized, tourist-based industry in Virginia (later expanding elsewhere).
146. **The Arts Group** is modestly confined to artistic activities of painting and sketching of pictures, sculpting, and with making pottery. Photography, poetry, song writing, wood carving, garden objects, and cabinet making, landscaping and flower arranging are typically (but not exclusively) dealt with by other Groups. The Group sponsors a membership organization with regular meetings with lectures, shows, news, techniques, and art-supplier advertisement.
147. **Dis 'n Dat** is a proposed idea that Rural System or others sponsor a contest, perhaps computer-aided, perhaps once a year, for people to win substantial prizes based on knowing word usage, one aspect of SOL comprehension and journalism abilities.

## Sector 6: Products and Services

148. **Right Rural** is the large, comprehensive citizens Group, an organization for everyone in the region and, later, everyone interested in the activities, operation, and successes of Rural System. Membership fees support the development and growth in effectiveness of Rural System, but it also provides members many benefits including a newsletter, access to their own website, alerts, discounts on equipment, products, clothing, entrance fees, and priority access both to consulting as well as uses of Rural System enterprise areas.
149. **The Past-60 Group** is a membership organization for folks that have done a fair amount of aging. Brought up on the idea of the importance of history, of building on the past, of respect for experience, on maintaining records, and of standing on the shoulders of giants, they still have those ideas and feelings. Members believe that they may still have something to offer and do so through their website. Local groups may form. Special advice, products, and related memberships are offered.
150. **Fog Drip** is an enterprise that collects, produces, and sells recordings of rural music. It brings citizens a vital part of national culture, the songs and music to which we all listen, play, and sing. It sells the new songs of the people of rural areas of the USA and, later, other countries.
151. **Floats** is an eChapbook and brings to citizens a vital part of national culture, the poems that give us pleasure, understanding, insights, and otherwise often-unattainable

dimensions of life. The poems are made available freely (the share-ware concept) to subscribers, and are primarily from the people of rural areas of the USA. They are original, unedited, and the best work of the authors submitting them. They are screened by the production staff.

152. **The Fauna File** is a place for writers to place articles that they do not care to submit to the journals of the Wildlife Society. It is an alternative, hardly a competitor. All articles, voluntarily submitted, go on the site and there are no reviews. It is a place where rejected manuscripts can be submitted and stored. It holds the premise that most things in the field of wild animal resources are unique or are expressions of equifinality. They are rarely genuinely subject to the standards and principles of laboratory or agricultural science.
153. **The Products Group** develops and sells products of some of the enterprises of Rural System. Some have beautiful, interesting things to sell that add profits and reduce the costs of achieving the greater system objectives. There may be little difference between products and services, but this group deals with the physical things, most of which are for sale. Though many products from the System are not trees, animal, soil, water, or fish, the product sales contribute to reducing the costs of achieving the central profit-making objective of Rural System. Thus a progressive, learning, improving system can be developed. Land, with its managers and users, “produces” things. They may be viewed as “goods,” as “income,” or as “benefits,” but these words overload the decision process with multiple past definitions and yet-debated, even un-identified nominal unit concepts. We call these things that are produced *product units*. They may provide service, aid in work, pleasure (art), memories, enable and augment membership, and stimulate ideas.
154. **The Toys Group** sells a special product set of handmade toys from Appalachia and other rural areas. These may be sold from an eBay drop-off unit or from the e-catalog. Some of the toys are sculpted from wood by The Sculptors.
155. **The Sculptors** is a business that promotes membership for those interested in sculpting in wood and other media. It is a new organization that forms local clubs, gives seminars, publishes a newsletter with ads and advice on a website, and has a chatroom. It sells quality, solar-seasoned wood, extracted from the certified sustainable Rural System enterprise environments. It encourages hobby carving, provides suggested patterns for work, and assembles carvers for large projects. With The Tours Group, it conducts high-quality, family-oriented carving schools such as conducted in Austria.
156. **Topics** are unique wooden and metal objects, often mobiles, large and small. Creating Topics is a form of sculpting, done by local people and sold to garden outlets and floral shops. These are numbered and authored objects, typically following a theme, and preparation offers local, part-time employment and marketing through The eBay Group and other Groups.
157. **The Big Bandana** is an example of a trivial product (bandanas) that is a marketing- and name-recognition device that can barely breakeven but is run from home by a part-time worker. Many unusual uses are featured with each purchase, and eventually other related products are added to the line.

158. **Ecorods** and ecodiscs are decomposable plastic devices used to measure the total, complex biological decomposition rate of forest and other soils. Grossly measuring the life of the soil at precise points (each with its own GPS-informed GIS database), the devices provide baseline information, measure effects of land treatment (or pollutants), and tend to provide a way to assure desired soil biodiversity.
159. **Brown Bags** of Rural System is an enterprise devoted to profit from producing a healthful, low-cost meal for health- and weight-conscious people of the modern era. Available for pickup or deliver as a kind of fast food, the image is one of healthful rural people enjoying lunch after a good morning work or hike. It may be developed into an early morning curbside, drive by, quick pick-up for school children and others' lunches.
160. **The Clumper** is a beautiful aid to personal lawn care, usually used in two ways. Leaves are raked into a flat row or cone-shaped pile. The Clumper is grabbed in the center of each bar, then wrapped over the pile, enclosing it, then the two bars are pressed toward each other as far as they will go, bar to bar. The leaf bundles are carried to the compost pile. Later, for clean-up, the Clumper is laid flat on the ground and leaves, acorns, etc. are raked onto it. The bars are pulled together and the bundle then carried like a satchel or suitcase to the compost pile to be dumped.
161. **Dogwood Inns** is a confederation of local dwellings, some "bed-and-breakfast," all maintained and operated to conserve energy, reduce the need for local investments for housing visitors, maintain the local character, and to help the aging owners of rural places. Aided by the Land Force, and closely related with the Gardens Group, the Inns provide dispersed housing for writers, conference goers, and business and school retreats. These are essential for profitability of tourism groups.
162. **Home Place** is a Group managing rural area homes that were left by emigrants, as hotels for temporary use, and upkeep. The Group functions as outdoor-related temporary room for guests relating to the long list of Rural System sights and actions.
163. **The eBay Group** is a drop-off spot (or spots) for local people to sell their items. It provides services (e.g., temporary storage, mailing, etc.), makes images, and secures highest prices, reducing the needs for the expertise required for such processing. It expands with eBay options, and offers an existing alternative to the price-based e-catalog of Rural System.
164. **The Warehouse Group** uses select, well-located lands that are unlikely to grow crops or provide other opportunities for storage (e.g., borrow pits, mines and quarries). The group benefits from GIS knowledge and from optimizing placement for those with produce (e.g., lumber, Alpha Earth) or items (e.g., vehicles) to be stored.
165. **RuraLives** captures the wisdom and experiences of rural people. For a modest fee, people submit information about themselves or their departed family or friends. RuraLives stores these stories on their servers for a fee. It seeks to value and conserve the lives of people, especially their rules-of-thumb, unique observations, grounds for success, and words for their grandchildren. Not an obituary entry, the enterprise allows expanded notes to be saved about people, and includes search capabilities for key words.
166. **The Memorials Group** offers special places for the placing of cremation remains, places of beauty and solitude and for reflection. It coordinates with RuraLives

and offers access to lasting memorials in books dedicated to loved ones. It offers special programs and projects for awards to retiring people of Rural System Groups.

167. **The Cemeteries Group** works with The Memorials Group to maintain cemeteries found on Rural System enterprise environments. It works with The Studies Group to learn about past peoples in the region, and works to make cemeteries into places of solitude.
168. **Outfits** is a clothing-related enterprise that offers a fit- and wearability-approval service, produces some prototype clothing items, provides advice for industries, markets computer-designed clothes-maker mannequins, and markets a computerized, personal-pattern producer.
169. **Pond Disks** are revised Seckey Disks that provide estimates of the amount of particulate matter in pond water.
170. **Stills** is an Internet marketplace for rural-related images of all types. This is a place for staff photographers as well as others (for a fee) to display their images from within the region for sale and other uses. It takes pictures to support the technical and marketing dimensions of the other groups. It holds profitable image contests (slides, prints, etc.) It supplements TV and marketing efforts.
171. **The Structures Group** creates solid-wood or whole-log cabins, providing them for recreational purposes such as hunting, fishing, and just plain enjoyment without having to go through the expense of building. Now “energy” cabins are being studied.
172. **The Zoo Group** would affiliate with established zoos and add value through offering its many products, educational material, and services. Within current law and policy, select native animals of the clusters may be kept on display for diverse educational and “studies” importance.
173. **The Aquarium Group** is for the many people who enjoy and keep aquarium fish. The Group would sell large aquaria with bonded service and a hotline, develop zoo displays of mollusks and their related fish (and sediment pollution effects), develop the water-garden-as-an-aquarium concept, promote the aquarium as a terrarium, relate to The Moss Group, develop aquaria sales with local pet stores, and develop cold-weather and electrical-emergency strategies.

## About the Author

While many Americans are presently astonished at conditions in rural America, Robert Giles, Jr., Ph.D., has been working tirelessly for decades on planning solutions to interconnected rural problems. Dr. Giles is a Professor Emeritus of Wildlife Management at Virginia Tech where he taught for 30 years. His Bachelor of Science degree in Biology and Master of Science degree in Wildlife Management are from Virginia Tech. His Ph.D. in Zoology is from The Ohio State University.

Dr. Giles was born on May 25, 1933 in Lynchburg, Virginia. He attended E.C. Glass High School, during which he was awarded a Bausch and Lomb Science award for studies of the ring-necked pheasant. As an Eagle Scout, he was awarded the W.T. Hornaday National Award for Distinguished Service to Conservation and the James E. West Scouting Conservation Scholarship. During his undergraduate years at Virginia Tech, Dr. Giles was an editor for several magazines and the president of the V.P.I. Corps of Cadets of 6,000 students. He was also a member of seven national honorary societies.

During his time as a Professor in the Department of Fisheries and Wildlife at Virginia Tech, Dr. Giles was known for his innovative applications of computer programming and Geographic Information Systems (GIS) to land management questions well before such skills became standard practice within the field (and before GIS was a term). With the support of the Tennessee Valley Authority (TVA), he created the woodland resource management system of TVA, once used on 300 farms a year. With staff and students, he created the first wildlife information base (BOVA – Biota of Virginia database). As chairman of a local planning commission, consultant to the National Wildlife Refuge System, aid to the State Cooperation Commission, consultant for Wintergreen and several realtors, and as a landowner himself, he has developed a unique and alternative perspective on land and its management. He wrote the first plan for wildlife other-than-game for Virginia.

Dr. Giles began working on the Rural System concept in the early 1980s, but did not begin in earnest until his retirement in 1998. When asked about his aims for designing Rural System, he said, “I am now convinced that a superior demonstration of modern comprehensive natural resource management is badly needed and is now possible and most likely within the context of a new corporate rural structure. I do not want to do research. I do want demonstrations of the results of literally millions of dollars of unused research findings. I propose to bring all the power of the computer that I can to realistic and relevant use for parts of the region. This will include using that power already achieved by investments of resource agencies. I propose a system, subject to the law and to reasonable issues of cost, propriety, and community acceptance, that achieves such objectives.”

A colleague of his once said that Dr. Giles can come up with more ideas in an hour than most people can in a lifetime. His creativity is exceeded only by his humanity. Raised in Southwest Virginia, Dr. Giles knows the struggles of people in Central Appalachia, impoverished after the collapse of coal and tobacco industries. He has visited rural areas of Africa (Nigeria, Senegal, Uganda), China and India, and is well-educated in the sufferings of people in poverty worldwide.

Dr. Giles is a systems thinker. He believes that the problems faced by environmentalists and those of interest to humanitarians are interconnected, and that a system of problems must be met with a system of solutions. His career, his values, and his innovative capabilities make him

uniquely suited to tell the story of how a for-profit systems approach can best solve the rural problems of a progressive, capitalist society.

## Contact information:

Robert H. Giles, Jr., Ph.D.  
509 Fairview Avenue  
Blacksburg, Virginia 24060  
United States of America

## Publisher:

Handshake Media, Incorporated  
<http://www.handshakemediainc.com>  
[contact@handshake20.com](mailto:contact@handshake20.com)